

REMARKS/ARGUMENTS

Favorable reconsideration of this application as presently amended and in light of the following discussion is respectfully requested.

Claims 1-58 are pending in the present application. Claims 1, 2, 4, 5, 21, 22, 45, 46, 48, 50, and 51 are amended, and Claims 52-58 are added by the present amendment.

In the outstanding Office Action, Claims 21 and 22 were rejected under 35 U.S.C. § 112, second paragraph; Claims 1, 2, 4, 5, 12, 13, 21, 22, 45, 46, 48, 50, and 51 were rejected under 35 U.S.C. § 103(a) as unpatentable over Arditty et al. (U.S. Patent No. 5,056,919, herein "Arditty") in view of Blake et al. (U.S. Patent No. 5,377,283, herein "Blake"); and Claims 15, 16, 23, 24, 26, 27, 34, 35, 37, 38, 43, and 44 were indicated as allowable if rewritten in independent form.

Applicant thanks the Examiner for the early indication of allowable subject matter. In view of this indication, new independent Claims 52-55 including the allowable matter of Claims 15, 16, 23, and 24, respectively, and the features of their base claims are presented. No new matter has been added. Accordingly, it is respectfully submitted that new Claims 52-55 are allowable.

Applicant also thanks Examiner Nguyen for the courtesy of an interview extended to Applicant's representative on October 10, 2003. During the interview differences between the claims and the applied art were discussed. Further, claim amendments clarifying the claims over the applied art were discussed. The present response sets forth those discussed claim amendments. No agreement was reached pending the Examiner's further review of a filed response. Arguments presented during the interview are reiterated below.

Dependent Claims 4 and 5 are amended to better present equation 14 disclosed in the specification at page 14, and dependent Claims 21 and 22 are amended to better describe a structure shown in Figures 12(a) and 12(b). No new matter has been added.

Regarding the rejection of Claims 21 and 22 under 35 U.S.C. § 112, second paragraph, Claims 21 and 22 are amended as suggested in the outstanding Office Action. No new matter has been added. Accordingly, it is respectfully requested that this rejection be withdrawn.

Claims 1, 2, 4, 5, 12, 13, 21, 22, 45, 46, 48, 50, and 51 were rejected under 35 U.S.C. § 103(a) as unpatentable over Arditty in view of Blake. That rejection is respectfully traversed.

Independent Claim 1 is amended to more clearly recite that two modulated light beams propagate in opposite directions along an optical path, a time-averaged intensity of light output from a second terminal of an optical distributor is detected, and a dependency between the detected time-averaged intensity and an optical modulation frequency applied by an optical modulation device is obtained. The claim amendments find support in the originally filed specification, for example, at least at page 15, line 20, to page 16, line 1, and at page 18, equation 11. No new matter has been added. Independent Claims 2, 45, 46, 48, 50, and 51 are amended similar to independent Claim 1.

Amended independent Claim 1 is directed to an optical dispersion measurement apparatus including an optical modulation device that modulates at least two of a plurality of light beams that propagate on an optical path on opposite directions, a detecting device that detects a time-averaged intensity of light output from a second terminal of an optical distributor, and a calculator device that obtains a dependency between the detected time-averaged intensity and an optical modulation frequency applied by the optical modulation device.

In a non-limiting example, Figure 1 shows the optical distributor 2a, the optical modulation device 5a, the detecting device 1, and the calculator device 50.

Arditty shows in Figure 8 a ring-shaped interferometer that measures a phase shift.¹ As recognized in the outstanding Office Action at page 2, third paragraph, “Arditty does not disclose means for relating an intensity of the detected light to an optical modulation frequency.” In addition, Arditty is silent about *detecting a time-averaged intensity* of light output from a second terminal of an optical distributor.

The outstanding Office Action also relies on Blake for disclosing a unit that relates an intensity of a detected light to an optical modulation frequency. Blake shows in Figure 2a a detector 14 and a modulator 19 connected to a bias modulation 20. However, as discussed during the interview, Blake does not teach or suggest a detecting device that detects a time-averaged intensity of light output from a second terminal of an optical distributor and a calculator device that obtains a dependency between the detected time-averaged intensity and an optical modulation frequency applied by an optical modulation device, as required by independent Claim 1.

Accordingly, it is respectfully submitted that independent Claims 1, 2, 45, 46, 48, 50, and 51 and each of the claims dependent therefrom patentably distinguish over the applied art.

New independent Claims 56-58 are added to set forth the invention in a varying scope and Applicant submits that the new claims are supported by the originally filed specification. In particular, new Claims 56-58 are similar to Claims 1, 2, and 51, respectively, but have been drafted to not use means-plus-function terminology. It is respectfully submitted that new Claims 56-58 are allowable for similar reasons as discussed above.

¹ Arditty, Abstract.

Consequently, in light of the above discussion and in view of the present amendment, the present application is believed to be in condition for allowance and an early and favorable action to that effect is respectfully requested.

Respectfully submitted,

OBLON, SPIVAK, McCLELLAND,
MAIER & NEUSTADT, P.C.

Customer Number

22850

Tel: (703) 413-3000
Fax: (703) 413 -2220
GJM/SS/RFF:sjh

I:\ATTY\RFF\199313US-AM.DOC



Gregory J. Maier
Registration No. 25,599
Surinder Sachar
Registration No. 34,423
Attorneys of Record